

CLAIMS

What is claimed:

1. An electronic package, comprising:

a substrate having at least a first resilient layer with a first edge and a flexible layer which is bent, with the first edge promoting where the flexible layer is bent;

a plurality of traces supported by the substrate and extending from a first portion to a second portion on opposite sides of the edge; and

at least a first electronic device, carrying an integrated circuit, mounted to the substrate on the first side of the edge.
2. The electronic package of claim 1, further comprising:

a second electronic device mounted to the substrate on the second side of the edge.
3. The electronic package of claim 1, wherein the substrate has a second resilient layer with a second edge spaced from and substantially parallel to the first edge, the second edge promoting where the flexible layer is bent.
4. The electronic package of claim 3, wherein the second resilient layer is in a plane parallel to and above a plane of the first resilient layer.
5. An electronic package, comprising:

a substrate having a first portion, a second portion, and a fold portion between the first and second portions, the substrate including at least a first resilient layer forming part of the first portion and a flexible layer, the flexible layer being bent so that the second portion is in a plane above and substantially parallel to the first portion, with a first edge of the first resilient layer promoting where the flexible layer is bent;

a plurality of first contacts exposed on an upper side of the first portion;

a plurality of terminals exposed on a lower side of the first portion;

a plurality of vias in the first portion interconnecting at least some of the first contacts with at least some of the terminals;

a plurality of second exposed contacts on the second portion; and

a plurality of traces supported by the substrate and extending from the first portion across the fold portion to the second portion to the second contacts.

6. The electronic package of claim 5, wherein the substrate includes a second resilient layer forming part of the second portion, a second edge of the second portion promoting where the flexible layer is bent, the fold region being between the first and second edges.

7. The electronic package of claim 6, wherein the edges create stress concentrations in the fold portion of the flexible layer.

8. The electronic package of claim 5, wherein at least one of the traces interconnects one of the first contacts with one of the second contacts.
9. The electronic package of claim 8, wherein at least one of the traces interconnects one of the terminals with one of the second contacts.
10. The electronic package of claim 5, wherein at least one of the traces interconnects one of the terminals with one of the second contacts.
11. The electronic package of claim 5, wherein the first resilient layer is made of metal.
12. The electronic package of claim 11, wherein the first resilient layer is electrically connected to one of the terminals.
13. The electronic package of claim 5, further comprising:
at least a first electronic device, carrying an integrated circuit, mounted to the first portion and having lands that are electrically connected to the first contacts.
14. The electronic package of claim 13, further comprising:
at least a second electronic device, carrying an integrated circuit, mounted to the second portion and having lands that are electrically connected to the second

contacts.

15. An electronic package, comprising:

a substrate having a first portion, a second portion, and a fold portion between the first and second portions, the substrate including at least a first resilient layer forming part of the first portion, a second resilient layer forming part of the second portion, and a flexible layer, the flexible layer being bent so that the second portion is in a plane above and substantially parallel to the first portion, with a first edge of the first resilient layer promoting where the flexible layer is bent and a second edge of the second portion promoting where the flexible layer is bent, the fold region being between the first and second edges;

a plurality of first contacts exposed on an upper side of the first portion;

at least a first electronic device, carrying an integrated circuit, mounted to the first portion and having lands that are electrically connected to the first contacts.

a plurality of terminals exposed on a lower side of the first portion;

a plurality of vias in the first portion interconnecting at least some of the first contacts with at least some of the terminals;

a plurality of second exposed contacts on the second portion;

at least a second electronic device, carrying an integrated circuit, mounted to the second portion and having lands that are electrically connected to the second contacts; and

a plurality of traces supported by the substrate and extending from the first

portion across the fold portion to the second portion to the second contacts.

16. The electronic package of claim 15, wherein the first resilient layer is made of metal.

17. The electronic package of claim 16, wherein the first resilient layer is electrically connected to one of the terminals.

18. A method of making an electronic package, comprising:
 mounting at least a first electronic device, carrying a microelectronic circuit, to a first portion of a substrate; and
 folding a second portion of the substrate over the first portion together with traces extending from the first portion to the second portion, at least one of the portions including a resilient layer with an edge promoting where the substrate is bent.

19. The method of claim 18, wherein the first and second portions each have a respective resilient layer having a respective edge, the edges jointly promoting bending of the substrate at a fold region between the edges.

20. The method of claim 18, further comprising:
 mounting a second electronic device, carrying a microelectronic circuit, to the

second portion of the substrate; and electrically connecting lands of the second electronic device to contacts on the second portion, the contacts being connected to the traces.